



PATENT  
Docket No. 404302000700

## DECLARATION FOR UTILITY PATENT APPLICATION

AS BELOW-NAMED INVENTORS, WE HEREBY DECLARE THAT:

Our residence, post office address, and citizenship are as stated below next to our names.

We believe we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled: METHOD FOR EXTRACTING FINGERPRINT FEATURE DATA USING RIDGE ORIENTATION MODEL, the specification of which is attached hereto unless the following box is checked:

☒ was filed on November 26, 2001 as United States Application Serial No. 09/994,173.

WE HEREBY STATE THAT WE HAVE REVIEWED AND UNDERSTAND THE CONTENTS OF THE ABOVE-IDENTIFIED SPECIFICATION, INCLUDING THE CLAIMS, AS AMENDED BY ANY AMENDMENT REFERRED TO ABOVE.

We acknowledge the duty to disclose information which is material to the patentability as defined in 37 C.F.R. § 1.56.

We hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Application No.	Country	Date of Filing (day/month/year)	Priority Claimed?
2001-053110	Republic of Korea	August 31, 2001	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

We hereby claim benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

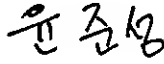
Application Serial No.	Filing Date

We hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, we acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

Application Serial No.	Filing Date	Status
		<input type="checkbox"/> Patented <input type="checkbox"/> Pending <input type="checkbox"/> Abandoned

We hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

11. Jan. 2002



Date: Name: Jun Sung YOON  
 Residence: Room 507, Samhwan, Apartment No. 8, Ogum-dong, Songpa-gu, Seoul, Republic of Korea  
 Citizenship: Republic of Korea  
 Post Office Address: Room 507, Samhwan, Apartment No. 8, Ogum-dong, Songpa-gu, Seoul, Republic of Korea

11. Jan. 2002



Date: Name: Dong Hun KIM  
 Residence: Room 711, Mugigae Apt. No. 206, 512 Junggye 3-dong, Nowongu, Seoul, Republic of Korea  
 Citizenship: Republic of Korea  
 Post Office Address: Room 711, Mugigae Apt. No. 206, 512 Junggye 3-dong, Nowongu, Seoul, Republic of Korea

11. Jan. 2002



Date: Name: Chul Min JOE  
 Residence: Myeong Sung B/D 208, 752-19, Yeogsamdong Gangnamgu, Seoul, Republic of Korea  
 Citizenship: Republic of Korea  
 Post Office Address: Myeong Sung B/D 208, 752-19, Yeogsamdong Gangnamgu, Seoul, Republic of Korea

11. 1. 2002



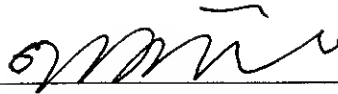
Date: Name: Soon Won JUNG  
 Residence: A-109 Green Apartment Jamwon-dong, Seocho-gu  
 Citizenship: Republic of Korea  
 Post Office Address: A-109 Green Apartment Jamwon-dong, Seocho-gu

11. 1 2002



Date: Name: Hwi Seok LEE  
 Residence: 103-506 Dusan Apartment, Guro 4-dong, Guro-gu, Seoul, Republic of Korea  
 Citizenship: Republic of Korea  
 Post Office Address: 103-506 Dusan Apartment, Guro 4-dong, Guro-gu, Seoul, Republic of Korea

11. Jan. 2002



Date  
Name: Byun Jin LEE  
Residence: #101, 64-10 Juam-dong, Kwachon-si, Gyunggi, Seoul, Republic of Korea  
Citizenship: Republic of Korea  
Post Office Address: #101, 64-10 Juam-dong, Kwachon-si, Gyunggi, Seoul, Republic of Korea

16. Jan. 2002

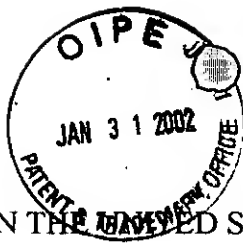


Date  
Name: Dong Won LEE  
Residence: #112-402 Hyundai Apartment, 700-1 Poongdukchun-ri, Suji-Eup, 449-840  
Yongin, Gyunggi, Republic of Korea  
Citizenship: Republic of Korea  
Post Office Address: #112-402 Hyundai Apartment, 700-1 Poongdukchun-ri, Suji-Eup, 449-840  
Yongin, Gyunggi, Republic of Korea

11.1.2002



Date  
Name: Taek Ki LEE  
Residence: 501-902 Woosung 5 Apt, 4933 Singil 3-dong, Yeongdeungpo-gu, Seoul, Republic of Korea  
Citizenship: Republic of Korea  
Post Office Address: 501-902 Woosung 5 Apt, 4933 Singil 3-dong, Yeongdeungpo-gu, Seoul, Republic of Korea



PATENT  
Docket No. 404302000700

#

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Jun Sung YOON et al.

Serial No.: 09/994,173

Filing Date: November 26, 2001

For: METHOD FOR EXTRACTING  
FINGERPRINT FEATURE DATA  
USING RIDGE ORIENTATION  
MODEL

Examiner: To Be Assigned

Group Art Unit: 2621

**PROSECUTION BY ASSIGNEE AND POWER OF ATTORNEY  
UNDER 37 C.F.R. § 3.71**

Box Missing Parts  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

SecuGen Corporation, the assignee of the entire right, title and interest in this patent application, under 37 C.F.R. § 3.71 hereby appoints:

Lisa A. Amii (Reg No. 48,199)  
Mehran Arjomand (Reg No. 48,231)  
Sanjay S. Bagade (Reg No. 42,280)  
Shantanu Basu (Reg No. 43,318)  
Vincent J. Belusko (Reg No. 30,820)  
Kimberly A. Bolin (Reg No. 44,546)  
Tyler S. Brown (Reg No. 36,465)  
A. Randall Camacho (Reg No. 46,595)  
Robert K. Cerpa (Reg No. 39,933)  
Alex Chartove (Reg No. 31,942)  
Thomas E. Ciotti (Reg No. 21,013)  
Matthew M. D'Amore (Reg No. 42,457)  
Peter Davis (Reg No. 36,119)  
Karen B. Dow (Reg No. 29,684)  
Carolyn A. Favorito (Reg No. 39,183)  
Hector Gallegos (Reg No. 40,614)

Randolph Ted Apple (Reg No. 36,429)  
Laurie A. Axford (Reg No. 35,053)  
Erwin J. Basinski (Reg No. 34,773)  
Richard R. Batt (Reg No. 43,485)  
Jonathan Bockman (Reg No. 45,640)  
Barry E. Bretschneider (Reg No. 28,055)  
Nicholas Buffinger (Reg No. 39,124)  
Mark R. Carter (Reg No. 39,131)  
Peng Chen (Reg No. 43,543)  
Thomas Chuang (Reg No. 44,616)  
Cara M. Coburn (Reg No. 46,631)  
Raj S. Davé (Reg No. 42,465)  
David Devernore (Reg No. P-50,128)  
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David L. Fehrman (Reg No. 28,600)  
Thomas George (Reg No. 45,740)

Deborah S. Gladstein (Reg No. 43,636)  
Kenneth R. Glick (Reg No. 28,612)  
Johney U. Han (Reg No. 45,565)  
Alan S. Hodes (Reg No. 38,185)  
Kelvan P. Howard (Reg No. P48,999)  
Jill A. Jacobson (Reg No. 40,030)  
Madeline I. Johnston (Reg No. 36,174)  
Ararat Kapouytian (Reg No. 40,044)  
Cameron A. King (Reg No. 41,897)  
Kawai Lau (Reg No. 44,461)  
Rimas T. Lukas (Reg No. 46,451)  
Gladys H. Monroy (Reg No. 32,430)  
Kate H. Murashige  
Martin M. Noonan (Reg No. 44,264)  
Phillip Reilly (Reg No. 41,415)  
Debra A. Shetka (Reg No. 33,309)  
Kevin R. Spivak (Reg No. 43,148)  
Thomas L. Treffert (Reg No. P48,279)  
Michael R. Ward (Reg No. 38,651)  
Todd W. Wight (Reg No. 45,218)  
Frank Wu (Reg No. 41,386)  
Peter J. Yim (Reg No. 44,417)  
Karen R. Zachow (Reg No. 46,332)

Debra J. Glaister (Reg No. 33,888)  
Bruce D. Grant (Reg No. 47,608)  
Douglas G. Hodder (Reg No. 41,840)  
Charles D. Holland (Reg No. 35,196)  
Peter Hsieh (Reg No. 44,780)  
Wayne Jaeschke, Jr. (Reg No. 38,503)  
Parisa Jorjani (Reg No. 46,813)  
Richard C. Kim (Reg No. 40,046)  
Lawrence B. Kong (Reg No. P49,043)  
Glenn Kubota (Reg No. 44,197)  
Michael J. Mauriel (Reg No. 44,226)  
Philip A. Morin (Reg No. P-45,926)  
Mabel Ng (Reg No. P48,922)  
Catherine M. Polizzi (Reg No. 40,130)  
Robert E. Scheid (Reg. No. 42,126)  
Terri Shieh-Newton (Reg No. 47,081)  
Stanley H. Thompson (Reg No. 45,160)  
Brenda J. Wallach (Reg No. 45,193)  
E. Thomas Wheelock (Reg No. 28,825)  
Eric Witt (Reg No. 44,408)  
David T. Yang (Reg No. 44,415)  
George C. Yu (Reg No. 44,418)

all of Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, California 94304-1018, telephone (650) 813-5600, to prosecute this application and transact all matters in the United States Patent and Trademark Office connected therewith, said appointment to be to the exclusion of the inventors and their attorneys in accordance with the provisions of 37 C.F.R. § 3.71 provided that if any one of said attorneys or agents ceases being affiliated with the law firm of Morrison & Foerster as partner, employee or of counsel, such attorney's or agent's appointment as attorney or agent and all powers derived therefrom shall terminate on the date such attorney or agent ceases being so affiliated.

Please direct all written communications relative to this application to:

Douglas G. Hodder  
Morrison & Foerster LLP  
755 Page Mill Road  
Palo Alto, California 94304-1018

Please direct all telephone communications to Douglas G. Hodder at (650) 813-4203.

SecuGen Corporation  
a California corporation

Dated: 1-16-2002



Name: Dong Won Lee  
Title: Chief Technology Officer  
Address: 348 Montague Expressway  
Milpitas, California 95035

Applicant/Patentee: Jun Sung YOON et al.

Serial No./Patent No.: 09/994,173

Filed on/Issued: November 26, 2001

For: METHOD FOR EXTRACTING FINGERPRINT FEATURE DATA USING RIDGE ORIENTATION MODEL

Docket No.: 404302000700

JAN 31 2002

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS  
37 C.F.R. §§ 1.9(f) AND 1.27(c) — SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:  
☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN: SecuGen Corporation

ADDRESS OF CONCERN: 348 Montague Expressway, Milpitas, California 95035

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 C.F.R. § 121.12, and reproduced in 37 C.F.R. § 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled METHOD FOR EXTRACTING FINGERPRINT FEATURE DATA USING RIDGE ORIENTATION MODEL by inventor(s) Jun Sung YOON, Dong Hun KIM, Chul Min JOE, Soon Won JUNG, Hwi Seok LEE, Byun Jin LEE, Dong Won LEE, and Taek Ki LEE described in

- ☐ the specification filed herewith with title as listed above.  
☒ the application identified above.  
☐ the patent identified above.

If the rights held by the above identified business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 C.F.R. § 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 C.F.R. § 1.9(d), or a nonprofit organization under 37 C.F.R. § 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

- ☒ no such person, concern, or organization exists.  
☐ each such person, concern or organization is listed below.

NAME	ADDRESS	TYPE
		<input type="checkbox"/> Individual <input type="checkbox"/> Small Business Concern <input type="checkbox"/> Nonprofit Organization

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 C.F.R. § 1.27)

I acknowledge the duty to file, in this application or patent, notification or any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 C.F.R. § 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

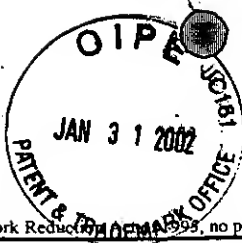
NAME OF PERSON SIGNING: Dong Won Lee

TITLE OF PERSON IF OTHER THAN OWNER: Chief Technology Officer

ADDRESS OF PERSON SIGNING: 348 Montague Expressway, Milpitas, California 95035

SIGNATURE: 

DATE: 1-16-2002



2621

PTO/SB/96 (08-00)

Approved for us through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Project (09-99), no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**

Applicant/Patent Owner: Jun Sung YOON et al.

Application No./Patent No.: 09/994,173

Filed/Issue Date: November 26, 2001

Entitled: METHOD FOR EXTRACTING FINGERPRINT FEATURE DATA USING RIDGE ORIENTATION MODEL

SecuGen Corporation.

a

corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.  
The extent (by, percentage) of its ownership interest is \_\_\_\_\_ %

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

[NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

1-16-2002

Date

*[Signature]*

Signature

CTO

Title

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Attorney Docket No.: 404302000700



# COPY

## ASSIGNMENT JOINT

THIS ASSIGNMENT, by Jun Sung YOON of Room 507, Samhwan, Apartment No. 8, Ogum-dong, Songpa-gu, Seoul, Korea, Dong Hun KIM of Room 711, Mugigae Apartment No. 206, 512 Junggye 3-dong, Nowongu, Seoul, Korea, Chul Min JOE of Myeong Sung B/D 208, 752-19, Yeogsamdong Gangnamgu, Seoul, Korea, Soon Won JUNG of A-109 Green Apartment Jamwon-dong, Seocho-gu, Hwi Seok LEE of 103-506 Dusan Apartment, Guro 4-dong, Guro-gu, Seoul, Korea, Byun-Jin LEE of #101, 64-10 Juam-dong, Kwachon-si, Gyunggi, Seoul, Korea, Dong Won LEE of #112-402 Hyundai Apartment, 700-1 Poongdukchun-ri, Suji-Eup, 449-840 Yongin, Gyunggi, Korea, Taek Ki LEE of 501-902 Woosung 5 Apartment, 4933 Singil 3-dong, Yeongdeungpo-gu, Seoul, Korea and Nitgen Corporation, a Korean Corporation having a principle place of business at Sanhak Research Foundation Building, 4th floor, 1337-31 Seocho-dong Seocho-gu, Seoul, Korea (hereafter referred to collectively as Assignors) witnesseth:

WHEREAS, said Assignors have invented or own certain new and useful improvements in METHOD FOR EXTRACTING FINGERPRINT FEATURE DATA USING RIDGE ORIENTATION MODEL, set forth in an application for Letters Patent of the United States, claiming priority to Korean patent application number 2001-053110, filed on August 31, 2001; and

WHEREAS, SecuGen Corporation, a corporation duly organized under and pursuant to the laws of California and having its principal place of business at 348 Montague Expressway, Milpitas, California 95035 (hereinafter referred to as the Assignee) is desirous of acquiring the entire right, title and interest in the United States of America and to said inventions and said application for Letters Patent of the United States, to be obtained therefor and thereon:

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, said Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto said Assignee, its successors, legal representatives and assigns, the entire right, title and interest in the United States of America in and to the above-mentioned inventions, application for Letters Patent, and any and all Letters Patent or Patents in the United States of America which may be granted therefor and thereon, and in and to any and all divisions, continuations and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents of the United States of America, same to be held and enjoyed by said Assignee, for its own use and the use of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignors, had this sale and assignment not been made.

AND for the same consideration, said Assignors hereby covenant and agree to and with said Assignee, its successors, legal representatives and assigns, that said Assignors will, whenever counsel of said Assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent of the United States of America, or any proceeding in any country in connection with Letters Patent of the United States of America for said inventions, including interference proceedings, is lawful and desirable, or that any division, continuation or continuation-in-part of any application for Letters Patent of the United States of America or any reissue or extension of any Letters Patent of the United States of America, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent of the United States of America for said inventions, without charge to said Assignee, its successors, legal representatives and assigns, but at the cost and expense of said Assignee, its successors, legal representatives and assigns.

AND said Assignors hereby request the Commissioner of Patents to issue said Letters Patent of the United States of America to said Assignee as the Assignee of said inventions and the Letters Patent of the United States of America to be issued thereon for the sole use of said Assignee, its successors, legal representatives and assigns.

11/13/2001  
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11/19/2001  
Date

11/13/2001  
Date

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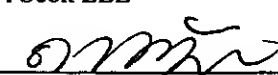
Jun Sung YOON

  
Dong Hun KIM

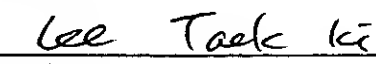
  
Chul Min JOE

  
Soon Won JUNG

  
Hwi Seok LEE

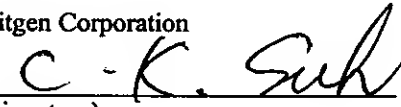
  
Byung Jin LEE

  
Dong Won LEE

  
Taek Ki LEE

and

By:

Nitgen Corporation  
  
(Signature)

Chul-Kyo Suh  
(Print name of person signing)

COO  
(Title)